IN THE CLAIMS

For the convenience of the Examiner, all pending claims of the present Application are shown below whether or not an amendment has been made.

1. **(Currently Amended)** A system for allocating bandwidth in a wireless communications network, comprising:

a geo-location tool residing on a computer-readable medium, the geo-location tool operable to:

receive data for a wireless communications network including a plurality of geo-location areas;

estimate bandwidth parameters for a geo-location area based on the data; and

generate, based on the data, a current usage map indicating real-time bandwidth being utilized at the geo-location area, the current usage map being subdivided into a plurality of bins representing the geo-location area, each bin representing the location of a portion of the geo-location area and containing data associated with the corresponding portion of the geo-location area; and

an allocation engine residing on the computer-readable medium, the allocation engine operable to allocate bandwidth in the geo-location area based on its bandwidth parameters.

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2. **(Original)** The system of Claim 1, further comprising:

the geo-location tool further operable to determine an allocation bandwidth for the geo-location area; and

the allocation engine further operable to allocate bandwidth in the geo-location area based on the allocation bandwidth.

3. **(Original)** The system of Claim 1, wherein the bandwidth parameters comprise at least one of a bandwidth usage and a bandwidth demand for the geo-location area.

4. **(Original)** The system of Claim 1, wherein the bandwidth parameters comprise bandwidth interference contribution for the geo-location area.

5. **(Previously Presented)** The system of Claim 1, further comprising:

the geo-location tool operable to estimate bandwidth parameters for the geo-location area on a per service class basis; and

the allocation engine operable to allocate bandwidth in the geo-location area on the per service class basis based on the bandwidth parameters.

6. **(Original)** The system of Claim 1, wherein the data received by the geo-location tool comprises historic and service level data for the wireless communications network.

7. **(Original)** The system of Claim 1, the geo-location tool further operable to generate, based on the data, a source map comprising sources of bit usage in the geo-location area and to estimate bandwidth parameters for the geo-location area based on the source map.

8. **(Original)** The system of Claim 7, wherein the sources of bit usage comprise a high bandwidth use facility for which a contractual service level is provided by the wireless communications network.

9. **(Original)** The system of Claim 7, wherein the sources of bit usage comprise an establishment for which local wireless access is provided by the wireless communications network at a contractual service level.

10. **(Original)** The system of Claim 1, wherein the data comprises contractual service level data.

11. **(Original)** The system of Claim 1, wherein the data comprises at least one of data measured from usage within the wireless communications network, radio frequency measurement, and interference estimates.

12. **(Original)** The system of Claim 1, the geo-location tool further operable to generate, based on the data, a subscriber usage profile indicating the probability of a subscriber engaging in a connection at the geo-location area and to estimate bandwidth parameters based on the subscriber usage profile.

13. **(Original)** The system of Claim 12, wherein the subscriber usage profile comprises mobility information for the subscriber.

14. **(Original)** The system of Claim 12, wherein the subscriber usage profile comprises service class invocation information for the subscriber.

15. **(Original)** The system of Claim 12, wherein the subscriber usage profile comprises call hold information for the subscriber.

16. **(Cancelled)**

17. **(Previously Presented)** The system of Claim 1, wherein the current usage map comprises a peak rate for each active connection within the geo-location area.

18. **(Original)** The system of Claim 17, wherein the current usage map comprises activity and service class information for each active connection within the geo-location area.

19. **(Previously Presented)** The system of Claim 18, wherein the current usage map comprises primary and neighboring server information for each active connection within the geo-location area.

20. **(Original)** The system of Claim 1, the geo-location tool further operable to generate, based on the data, a current demand map for the geo-location area based on the data.

21. **(Original)** The system of Claim 20, wherein the current demand map comprises a peak rate for each active connection within the geo-location area.

22. **(Original)** The system of Claim 21, wherein the current demand map comprises activity and service class information for each active connection within the geo-location area.

23. **(Previously Presented)** The system of Claim 22, wherein the current demand map comprises primary and neighboring server information for each active connection within the geo-location area.

24. **(Original)** The system of Claim 1, the geo-location tool further operable to generate, based on the data, an expected demand map for the geo-location area based on the data.

25. **(Original)** The system of Claim 24, wherein the expected demand map comprises a peak rate for each potential connection within the geo-location area.

26. **(Original)** The system of Claim 25, wherein the expected demand map comprises activity and service class information for each potential connection within the geo-location area.

27. **(Original)** The system of Claim 26, wherein the expected demand map comprises primary and neighboring server information for each potential connection within the geo-location area.

28. **(Original)** The system of Claim 1, the geo-location tool further operable to generate an interference contribution map indicating the impact on resource usage of supporting various bandwidths at the geo-location area based on the data.

29. **(Original)** The system of Claim 28, the interference contribution map comprising an interference contribution value and a probability for each of a plurality of service classes associated with bandwidths at one or more sectors within the geo-location area.

30. **(Original)** The system of Claim 28, wherein the interference contribution map indicates expected resource usage for each of a plurality of service classes at the geo-location area.

31. **(Original)** The system of Claim 2, the allocation engine further operable to generate a bandwidth supply map indicating the available bandwidth at the geo-location area based on the allocation bandwidth, a total bandwidth, and an interference contribution bandwidth for the geo-location area.

32. **(Currently Amended)** A method for allocating bandwidth in a wireless communications network, comprising:

receiving data for a mobile network including a plurality of geo-location areas;

estimating bandwidth parameters for a geo-location area based on the data;

generating a current usage map indicating real-time bandwidth being utilized at the geo-location area, the current usage map being subdivided into a plurality of bins representing the geo-location area, each bin representing the location of a portion of the geo-location area and containing data associated with the corresponding portion of the geo-location area; and

allocating bandwidth in the geo-location area based on the bandwidth parameters.

33. **(Original)** The method of Claim 32, further comprising:

determining allocation bandwidth for the geo-location area based on the data; and

allocating bandwidth in the geo-location area based on the allocation bandwidth.

34. **(Original)** The method of Claim 32, wherein the bandwidth parameters comprise at least one of a bandwidth usage and a bandwidth demand for the geo-location area.

35. **(Original)** The method of Claim 32, wherein the bandwidth parameters comprise bandwidth interference contribution for the geo-location area.

36. **(Original)** The method of Claim 32, further comprising:

estimating bandwidth parameters for the geo-location area on a per service class basis; and

allocating bandwidth in the geo-location area on the per service class basis based on the bandwidth parameters.

37. **(Original)** The method of Claim 32, wherein the data comprises historic and service level data for the wireless communication network.

38. **(Original)** The method of Claim 32, further comprising:

generating, based on the data, a source map comprising sources of bit usage in the geo-location area; and

estimating bandwidth parameters for the geo-location area based on the source map.

39. **(Original)** The method of Claim 38, wherein the sources of bit usage comprise a high bandwidth use facility for which a contractual service level is provided by the wireless communications network.

40. **(Original)** The method of Claim 38, wherein the sources of bit usage comprise an establishment for which local wireless access is provided by the wireless communication network at a contractual service level.

41. **(Original)** The method of Claim 32, wherein the data comprises contractual service level data.

42. **(Original)** The method of Claim 32, wherein the data comprises at least one of data measured from usage within the wireless communications network, radio frequency measurements, and interference estimates.

43. **(Previously Presented)** The method of Claim 32, further comprising:

generating, based on the data, a subscriber usage profile providing the probability of a subscriber engaging in a connection at the geo-location area; and

estimating bandwidth parameters based on the subscriber usage profile.

44. **(Original)** The method of Claim 43, wherein the subscriber usage profile comprises mobility information for this subscriber.

45. **(Original)** The method of Claim 43, wherein the subscriber usage profile comprises service class invocation information for this subscriber.

46. **(Original)** The method of Claim 43, wherein the subscriber usage profile comprises call hold information for this subscriber.

47. **(Cancelled)**

48. **(Previously Presented)** The method of Claim 32, wherein the current usage map comprises a peak rate for each active connection within the geo-location area.

49. **(Original)** The method of Claim 48, wherein the current usage map comprises activity and service class information for each active connection within the geo-location area.

50. **(Previously Presented)** The method of Claim 49, wherein the current usage map comprises primary and neighboring server information for each active connection within the geo-location area.

51. **(Original)** The method of Claim 32, further comprising generating a current demand map for the geo-location area based on the data.

52. **(Original)** The method of Claim 51, wherein the current demand map comprises a peak rate for each active connection within the geo-location area.

53. **(Original)** The method of Claim 52, wherein the current demand map comprises activity and service class information for each active connection within the geo-location area.

54. **(Previously Presented)** The method of Claim 53, wherein the current demand map comprises primary and neighboring server information for each active connection within the geo-location area.

55. **(Original)** The method of Claim 32, further comprising generating an expected demand map for the geo-location area based on the data.

56. **(Original)** The method of Claim 55, wherein the expected demand map comprises a peak rate for each potential connection within the geo-location area.

57. **(Original)** The method of Claim 56, wherein the expected demand map comprises activity and service class information for each potential connection within the geo-location area.

58. **(Previously Presented)** The method of Claim 57, wherein the expected demand map comprises primary and neighboring server information for each potential connection within the geo-location area.

59. **(Original)** The method of Claim 32, further comprising generating an interference contribution map indicating the impact on resource usage of supporting various bandwidths at the geo-location area based on the data.

60. **(Original)** The method of Claim 59, wherein the interference contribution map comprises an interference contribution value and a probability for each of a plurality of service classes associated with disparate bandwidths at one or more sectors within the geo-location area.

61. **(Original)** The method of Claim 59, wherein the interference contribution map indicates expected resource usage for each of a plurality of service classes at the geo-location area.

62. **(Original)** The method of Claim 33, further comprising generating a bandwidth supply map indicating the available bandwidth at the geo-location area based on the allocation bandwidth, a total bandwidth, and an interference contribution bandwidth for the geo-location area.

Claims 63 - 83 **(Previously Cancelled)**